

## **REMARKS**

### **SUMMARY:**

The subject application previously set forth claims 1-20, all of which are presently cancelled. New and currently active claims correspond to claims 21-32, of which claims 21 and 27 are independent claims.

The detailed action OF August 23, 2004 set forth rejection grounds for original claims 1, 2, 6, 7, 11, 12, 16 and 17 under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,911,069 (Beard). Original claims 3, 5, 8, 10, 13, 15, 18 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Beard in view of U.S. Patent No. 4,481,577 (Forson). Original claims 4, 9, 14 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Beard in view of U.S. Patent No. 5,761,407 (Benson et al.)

Responses to and traversals of each of the above rejections as set forth below in the order as presented by the Examiner in the August 23, 2004 Office Action. Comments are also presented which point out various patentable distinctions for new claims 21-32 relative to the aforementioned previously cited references.

Withdrawal of the previous rejections and allowance of all new claims 21 through 32 are respectfully requested.

### **35 U.S.C. § 102(b) Rejection (Claims 1-2, 6-7, 11-12 and 16-17):**

New independent claim 21 is directed to a method of providing exception handling for a computer program, and independent claim 27 is directed to a related exception handling system. Both claims set forth respective features (i.e., either steps or elements) related to various specific aspects of the present exception handling technology. The features of independent claim 21 (and similar features of claim 27) involve establishing a plurality of classes of exception types, providing an exception dictionary used to list instances of each exception type, throwing an exception, identifying an exception type for the exception using the exception dictionary, and providing an exception notice for the exception. The plurality of exception types provided for and listed in the exception dictionary include application exceptions,

system exceptions and validation exceptions.

Numbered page 2 of the August 23, 2004 Office Action set forth that Beard discloses all elements of previous original claim 1, including features related to establishing a plurality of exception types, providing an exception notice for an exception, and determining an exception type. Applicants respectfully submit that several aspects set forth in present claims 21 and 27 are not disclosed in, nor suggested by, Beard.

Beard does not disclose providing and identifying exception classes that specifically include application exceptions, system exceptions and validation exceptions. It is important to distinguish among such types of exceptions because they must be caught and recovered from in respectively different fashions, depending on which determination is made. See page 9, lines 11-17 of the original specification, which state:

Validation exceptions should be caught directly by the method where object-to-object communication is taking place. Every correction algorithm for a validation exception is unique. Therefore, it must be handled in the method which is throwing the validation exception. [In contrast, a]pplication and system exceptions should be propagated in special places, where they can be handled in the usual way [i.e., a conventional fashion]. Both of these exceptions [system and application exceptions] appear because of unpredictable events, which should be handled at a central place for better code and maintenance as well as extendability.

Beard does disclose in col. 9, lines 35-42 that exceptions are labeled with a string that indicates the type of exception that has occurred, and that for each type of exception a class is defined. Classes disclosed in Beard are generally referred to by variables, such as ClassA-ClassE, respectively. Therefore, Beard plainly fails to disclose the establishment and identification of thrown exceptions as specific types, including one of an application, system, or validation exception.

Beard is not concerned with specific types of exceptions because Beard is not concerned with features for capturing or recovering from exceptions. Regarding exceptions, Beard is only concerned with thrown exceptions and “handling the exchange of information” about exceptions within an object-oriented program.

As such, Beard: (1) fails to focus on the same technical needs and deficiencies as the present subject matter, and (2) fails to disclose all elements of present independent claims 21 and 27.

Furthermore, since Beard only makes reference to throwing of exceptions and abjectly lacks reference to any features for “capturing” or processing to recover from exceptions, Beard also fails to disclose all elements of present respective dependent claims 22 and 28.

Numbered page 2 of the August 23, 2004 Office Action equated “capturing” an exception as set forth in original claim 1 to “detecting” an exception. Such comparison is respectfully inaccurate. As set forth in the present original specification on page 9, signaling that an exceptional condition has occurred (i.e., detecting an exception) is known as “throwing” an exception. Recovering from an exceptional state is known as “catching” an exception. Beard provides no features for how to process an exception after it is detected, and thus fails to disclose or suggest features related to capturing an exception as set forth in present claims 22 and 28.

Since Beard does not disclose aspects related to subsequent processing or capturing of exceptions after detection of such, Beard also fails to disclose or suggest the elements set forth in present respective claims 23-24 and 29-30. The processing features set forth in claims 23-24 and 29-30 also require the determination of whether an exception is a validation exception. Since validation exceptions are not disclosed in Beard, such additional aspect of claims 23-24 and 29-30 is also not disclosed in or suggested by Beard.

Based on the present amendments and the remarks herein, Applicants respectfully request withdrawal of the rejections based on Beard and allowance of present claims 21-32.

**35 U.S.C. §103(a) Rejection (Claims 3, 5, 8, 10, 13, 15, 18 and 20):**

The remarks in the above section discuss several features that are not disclosed in nor suggested by the base reference Beard. The Examiner aptly notes that there are several other features that Beard also fails to disclose (or to suggest). More particularly, the August 23, 2004 Office Action helpfully and correctly notes that Beard fails to disclose using an exception dictionary. However, such Office Action further asserts that U.S. Patent No. 4,481,577 (Forson) allegedly cures such deficiency of the base reference Beard by disclosure of an indexed file and dictionary set of definitions.

Applicants respectfully submit that features for providing an exception dictionary and for identifying an exception type as one of a system, application or validation exception using the exception dictionary is not disclosed in Forson nor suggested by Forson. Therefore, as a matter of law, Forson can not cure the significant deficiencies of the base reference Beard already noted by the Office Action.

Forson discloses a method of operating a computer system in which customized error messages are stored in an indexed file, some having token words, and a dictionary list of definitions for all token words is developed. The type of dictionary disclosed in Forson is not an exception dictionary and is used in a completely different fashion than the exception dictionary features set forth in claims 21 and 27. Moreover, the error messages referred to herein should not be equated to exceptions, as was equated by the Examiner – in contrast, these are different phenomena.

Referring to claim 1 of Forson, the dictionary disclosed in such reference is used to permit customized messages to the operator of a computer system. When a message has certain identifiable “token words”, a dictionary may be used to retrieve definitions for such token words so that the message can be provided with a complete meaning. Such error messages are implemented according to Forson instead of conventional error numbers, for the convenience of a user so that such users do not have to take a message number and then consult a manual in order to obtain a definite meaning to the message (see col. 1, lines 15-20 of Forson).

The technology disclosed in Forson is not related to a dictionary used to identify exceptions types, much less specific exceptions such as system, application and

validation exceptions, as affirmatively set forth in present independent claims 21 and 27. As such, Forson fails to cure the above-noted important deficiencies of Beard, wherefore neither Beard nor Forson, singularly or in combination, sets forth or suggests all elements of present independent claims 21 and 27. As such, Applicants respectfully submit that independent claims 21 and 27 are patentable over such references.

Applicants further submit that the USPTO position fails to set forth a valid suggestion or motivation to combine Beard and Forson references. The August 23, 2004 Office Action sets forth on numbered page 3 “that one of ordinary skill in the art would have been motivated to combine the teachings of Beard and Forson because this would have allowed customization of exception notice without availability of the source code”.

Forson does not deal with exceptions, and as discussed above, the dictionary features employed in such reference are for different reasons than those set forth in present independent claims 21 and 27. Furthermore, Beard does not teach features for how to process exceptions--only how to characterize them. Therefore, Applicants submit that such characteristics actually teach away from any combination of Beard and Forson references.

Accordingly, as a matter of law, respectfully there can be no proper suggestion or motivation to make the combination proposed by the USPTO position.

### **35 U.S.C. §103(a) Rejection (Claims 4, 9, 14, 19):**

Prior claims 4, 9, 14 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Beard in view of Benson et al. As previously noted, Beard fails to disclose many features of the present active claims. Applicants submit that Benson et al. also fail to cure those deficiencies.

Present independent claims 21 and 27 respectively set forth features for establishing and identifying exception types as one of a system, application or validation exception, using an exception dictionary. Applicants submit that these features of independent claims 21 and 27 are also not disclosed in Benson et al., and thus such claims should be allowed as patentable over the proposed combination of

references. Furthermore, the subject matter set forth in respective claims 23-26 and 29-32 is also not disclosed in or suggested by Benson et al.

Applicants further note that the August 23, 2004 Office Action compares the "validation exceptions" of the present subject matter to a "valid" exception as referenced in Benson et al. In actuality, Benson et al. merely refers to the determination of whether "exception\_cause pointer 340 is Null (i.e., does not have a valid value)". (See col. 8, lines 20-23 of Benson et al.) Valid or recognizable values for a pointer variable is not the same thing as an exception type, much less a validation exception. As such, the USPTO's characterization of Benson et al. respectfully is inaccurate in that regard.

Applicants respectfully submit that Beard and Benson et al. fail to singularly or in combination disclose or suggest all elements set forth in present claims 21-32, and as such allowance of such claims is respectfully requested.

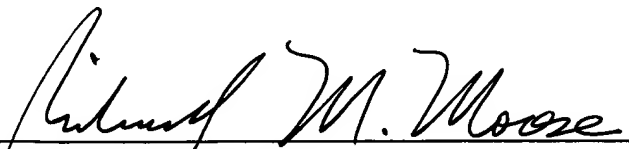
#### **CONCLUSION:**

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that the present application, including claims 21-32, is in complete condition for issuance of a formal Notice of Allowance, and action to such effect is earnestly solicited. The Examiner is invited to telephone the undersigned at his convenience should only minor issues remain after consideration of this response in order to permit early resolution of same.

Respectfully submitted,

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Date: April 22, 2005



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